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Wildlife Necropsy Summary

Fifteen wildlife cases were submitted for diagnostics in November.

Species	Date Received	County	Diagnosis
Mule Deer	11/2/2015	Carbon	Adenovirus
Pronghorn	11/3/2015	Johnson	Bacterial peritonitis
Mule Deer	11/6/15	Unknown	Intestinal hemorrhage
Mule Deer	11/6/2015	Sweetwater	Lung abscess and epicarditis
Mule Deer	11/9/2015	Lincoln	Adenovirus
Elk	11/10/2015	Carbon	Pending
Elk	11/10/2015	Carbon	Pending
Pronghorn	11/10/2015	Fremont	Adenovirus
Mule Deer	11/16/2015	Sweetwater	Emaciation
Mountain Lion	11/17/15	Fremont	Pending
Mule Deer	11/18/2015	Natrona	Adenovirus
Mule Deer	11/19/2015	Laramie	Pending
Mule Deer	11/23/2015	Platte	Adenovirus
Eurasian Collared Dove	11/24/2015	Goshen	Avian Paramyxovirus
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Case of the Month

Wyoming Game and Fish biologist, Gary Fralick, submitted five fawns from Star Valley to the Wildlife Health Laboratory. Adenovirus Hemorrhagic disease (AHD) was found to be the cause of death of each fawn. Although this disease has been documented in Wyoming, diagnostic tests for this disease were poor, and many cases were likely missed. Between 1999 and 2014, only sixteen animals were diagnosed with AHD (13 MD, 1 WTD, 2 moose). This level of mortality was not alarming and AHD was considered a somewhat obscure fringe disease in Wyoming.

That all changed in August of 2015 when Dr. Myrna Miller of the Wyoming State Veterinary Laboratory developed a new diagnostic test for AHD using polymerase chain reaction (PCR). Since then, 16 mule deer and one pronghorn have been diagnosed. Juvenile animals appear to be more susceptible than yearling or adult animals but mortality has been documented in all age classes. These preliminary results indicate that AHD may be a more significant mortality factor in juvenile mule deer than was previously considered; however, there is still much we do not know about this disease in Wyoming. Some of the big questions include: Is the increase in adenovirus cases related to better diagnostics or an increased incidence of AHD? Is occurrence of AHD cyclic? Are there management actions we should consider?

One approach to answering these questions will require development of a serologic test to identify AHD in blood samples. The Game and Fish Wildlife Health Laboratory maintains an extensive serum bank spanning 40 years. Serologic testing may provide an indication of the historical distribution and prevalence of AHD in Wyoming.

Thorne/Williams Wildlife Research Center (TWRC)

Never ending sheep facility construction

It's winter again here in the canyon. Despite the colder temperatures and howling winds we have been able to stay busy and productive. Most of our time has been spent working on our new sheep handling facility and alleys. Much of the alleyway from the individual pens into the building has been completed. We also put in water lines to the building as well as automatic waterers for the pastures. The building, alleyway, and pens should be fully functional and ready for sheep before the end of winter.

CWD vaccine study winding down

This November, we worked elk to collect samples for our CWD vaccine study. Only 11 elk remain in the study, most of which have specific genetics that allow them to survive longer in the face of chronic wasting disease. Sampling this month included blood, fecal, and saliva samples as well as biopsies to evaluate disease status. Many of these samples are being stored in the freezer with the hope that someday soon there might be a good way to test them for presence of CWD.



New sheep alleyway.

The legacy of the TWRC – Why study wildlife in captivity?



Over the past 60 years, the TWRC has contributed over 100 peer reviewed papers and countless research studies to scientific literature. Early research at the facility established very basic information on wildlife biology. We often take it for granted that we can quickly look up the gestation period for a pronghorn or a bighorn sheep. That information came from research at the TWRC. Early evaluations of wildlife nutrition, selective forage, and nutritional/mineral requirements for wildlife were conducted at our facility. A significant amount of disease research has been conducted in captivity including: understanding disease biology in wildlife species, evaluation of management strategies, and development of diagnostic tests that allow us to conduct surveillance for disease in wildlife populations nationwide.

Captive wildlife research also allows us to develop and evaluate safety of new wildlife management tools including: new types of GPS collars/wildlife marking tools; implants, transmitters, and sensors; new anesthetic protocols; population management options such as reproductive control; disease management tools such as vaccines or therapeutic treatments. All of these tools must be first evaluated for safety and efficacy in wildlife under controlled conditions before they can be used in free-ranging populations. The applications of captive wildlife work directly improve the health and welfare of free ranging wildlife while also providing safe and effective management tools for managing wildlife populations on the landscape.



Original TWRC director, Floyd Blunt, pioneered tools and techniques for handling wildlife in captivity.

Wildlife Health Laboratory

Surveillance updates:

Brucellosis surveillance in hunter-killed elk is well underway. By the end of November we have received 956 blood samples in the laboratory with 671 (70%) of those being suitable for testing. As we mentioned in our October Veterinary Services newsletter, the focus of our surveillance is the Bighorn Mountains, from which we have received 598 samples, with 438 (73%) being testable. From these samples, 411 were from yearlings or adults (considered the most valuable for brucellosis surveillance). As of the end of November, we have not identified a positive elk from any of the 438 samples collected in the Bighorn Mountains.



Kylie Sinclair processes blood samples from this year's brucellosis surveillance effort in hunter-killed elk.

Surveillance updates (continued):

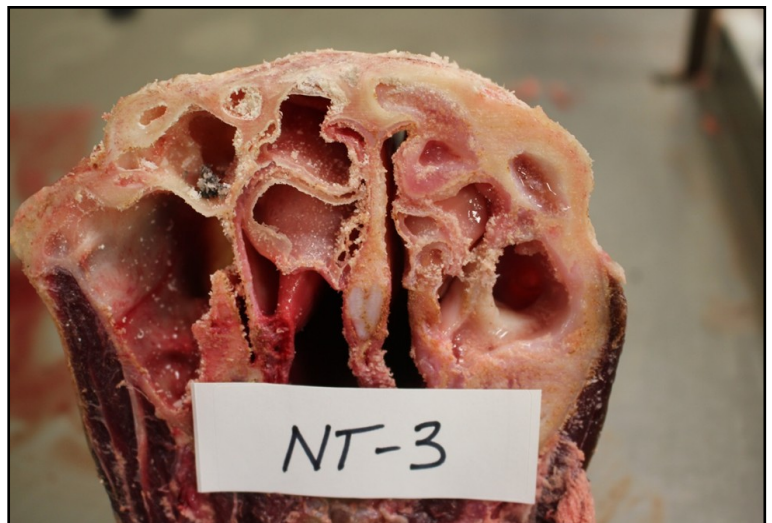
CWD surveillance in deer, elk and moose is starting to wind down. So far this season, we have received 1,176 samples (as of the end of November). Fifty-nine hunter-killed samples have been identified as positive for CWD, and letters have been sent notifying the hunters of the positive test results. Eight new hunt areas have been documented as having CWD this year; deer hunt areas 1, 24, 100, 112, 171, and elk hunt areas 12, 21, and 34.



Sampling a retropharyngeal lymph node for chronic wasting disease testing.

Bighorn Sheep Sinus Tumors

Veterinary Services initiated a surveillance effort this fall to survey for sinus tumors in the State's bighorn sheep herds. Collection kits were distributed to several taxidermists with a request that they save capped skulls (rather than tossing them in the trash) so they could be examined for sinus tumors. These tumors grow within the skull sinuses of the horns, forehead, and above the teeth, and have the ability to cause skull and horn deformities as well as potentially contribute to respiratory disease in the herd. Last year was the first time we documented nasal tumors in the state's bighorn sheep herds, when we found an affected ram from the Absaroka herd unit near Cody. So far this year we have received a total of 18 skulls from hunt areas 1, 2, 3, 4, 5, 7, 10, 12, and 22. Three skulls have strong evidence of sinus tumors; one from hunt area 1, one from 22, and one from an unknown hunt area.



Sinus tumor in a bighorn sheep from hunt area 1. Sinus tumors are evidenced by the thickened sinus walls on the right side.